Exhibit 1

Brian C. Rocca, Bar No. 221576
brian.rocca@morganlewis.com
Sujal J. Shah, Bar No. 215230
sujal.shah@morganlewis.com
Michelle Park Chiu, Bar No. 248421
michelle.chiu@morganlewis.com
Minna Lo Naranjo, Bar No. 259005
minna.naranjo@morganlewis.com
Rishi P. Satia, Bar No. 301958
rishi.satia@morganlewis.com
MORGAN, LEWIS & BOCKIUS LLP
One Market, Spear Street Tower
San Francisco, CA 94105-1596
Telephone: (415) 442-1000

Richard S. Taffet, *pro hac vice*
richard.taffet@morganlewis.com
MORGAN, LEWIS & BOCKIUS LLP
101 Park Avenue
New York, NY 10178-0060
Telephone: (212) 309-6000

Counsel for Defendants

Glenn D. Pomerantz, Bar No. 112503
glenn.pomerantz@mto.com
Kuruvilla Olasa, Bar No. 281509
kuruvilla.olasa@mto.com
MUNGER, TOLLES & OLSON LLP
350 South Grand Avenue, Fiftieth Floor
Los Angeles, California 90071
Telephone: (213) 683-9100

Kyle W. Mach, Bar No. 282090
kyle.mach@mto.com
Justin P. Raphael, Bar No. 292380
justin.raphael@mto.com
Emily C. Curran-Huberty, Bar No. 293065
emily.curran-huberty@mto.com
MUNGER, TOLLES & OLSON LLP
560 Mission Street, Twenty Seventh Fl.
San Francisco, California 94105
Telephone: (415) 512-4000

Jonathan I. Kravis, *pro hac vice*
jonathan.kravis@mto.com
MUNGER, TOLLES & OLSON LLP
601 Massachusetts Ave. NW, Ste 500E
Washington, D.C. 20001
Telephone: (202) 220-1100

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

IN RE GOOGLE PLAY STORE ANTITRUST LITIGATION

THIS DOCUMENT RELATES TO:

In re Google Play Consumer Antitrust Litig., Case No. 3:20-cv-05761-JD

State of Utah et al. v. Google LLC et al., Case No. 3:21-cv-05227-JD

Case No. 3:21-md-02981-JD

[PROPOSED] SUPPLEMENTAL BRIEF IN SUPPORT OF DEFENDANTS' MOTION TO EXCLUDE MERITS OPINIONS OF DR. HAL SINGER

Date:	August 3, 2023
Time:	10:00 am PT
Judge:	Hon. James Donato
Courtroom:	11, 19th Floor, 450 Golden Gate Ave, San Francisco, CA 94102

INTRODUCTION

Google submits this supplemental brief in support of its Daubert motion to exclude the injury and damages opinions of Dr. Hal Singer because his two supplemental expert reports (served after Google filed its *Daubert* motion) demonstrate that Dr. Singer's "pass-through" models produce anomalous results that do not make economic sense, and are thus unreliable. In those reports—a supplemental and supplemental reply report—Dr. Singer, for the first time, calculated alleged "overcharge" damages for individual consumer plaintiffs[1] using his "pass-through" models. Those models are premised on the theory that if developers paid lower service fees, then they would reduce prices for consumers. However, Dr. Singer's new calculations confirm that Dr. Singer's "pass-through" models do not and cannot reliably predict the prices that developers would charge if they paid lower service fees.

First, the methodology Dr. Singer used to calculate individual damages in his Supplemental Report predicted that developers would have reduced prices in the but-for world by more than the total amount of service fees they paid to Google in the actual world. *Second*, when Dr. Singer tried to fix this problem by employing a different methodology for calculating individual damages in his Supplemental Reply Report, his new methodology predicted that developers' prices in the but-for world would be higher when their service fees were lower. Dr. Singer admitted that this "would not be consistent with the Logit model" or "the teachings of economics." Ex. G to Raphael Declaration[2], Singer Tr. (July. 18, 2023) at 16:14-18, 17:4-16. Indeed, predicting that developers would charge higher prices at lower service fees is the *opposite* of Dr. Singer's pass-through theory that lower service fees would lead to lower prices. In short, when Dr. Singer finally used his model to calculate damages for individual consumers, he generated predictions that were inconsistent with basic economic principles. This confirms that Dr. Singer's injury and damages model is not reliable and should be excluded.

[1] Dr. Singer submitted these supplemental reports to estimate damages for two representatives of the consumer class and four consumers who were originally named as class representatives but were not proper representatives because they were not members of the class.

[2] All references to "Ex." are to the concurrently-filed declaration of Justin P. Raphael.

ARGUMENT

I. Dr. Singer's Original Pass-Through Model Predicts Overcharges That Exceed What Developers Paid in Service Fees

In his Supplemental Report, Dr. Singer calculated damages for six individual consumer plaintiffs using a category-wide average "overcharge rate" derived from his unreliable pass-through model ("Supplemental Report methodology"). Dr. Singer used the average "overcharge rate" for transactions in each app category and then applied that rate to *all* transactions by each individual consumer in that category—regardless of whether the actual service fee for that transaction was 15%, 30% or something else. Ex. C, Singer Suppl. Rep. ¶ 4, Table 1. This methodology produced results that do not make economic sense.

First, Dr. Singer's Supplemental Report methodology predicted overcharges to developers on numerous transactions that were ***higher*** than the service fees actually paid by developers in the real world. Ex. D, Leonard Suppl. Rep. ¶ 4(e). For example, for one of the individual plaintiffs' transactions, "Dr. Singer calculates the service fee 'overcharge' to be $3.24, but the actual service fee charged was only $2.70." *Id.* at ¶ 15. For numerous transactions, Dr. Singer predicted that if Google charged a lower service fee, developers would have reduced prices not merely by the amount that they would have saved, but by more than the total amount that the developer originally paid in service fees in the first place. The upshot is that Dr. Singer's pass-through model predicts consumer damages on these transactions that are greater than the amount that Google collected in service fees. That makes no sense as a measure of antitrust damages—or as a matter of economics—and shows that Dr. Singer's model is not reliable.

Second, when Dr. Singer used the "Single Take Rate" and "Hybrid" variations of his pass-through model, Dr. Singer's Supplemental Report methodology predicted that, for many transactions, Google would have charged a service fee rate in the but-for world that was ***higher*** than the service fee rate that developers actually paid in the real world. *Id.* ¶ 18. Where a developer paid a lower fee in the actual world than predicted in the but-for world, there is no

"overcharge" to pass through to consumers. *See id.* ¶ 19. Thus, Dr. Singer's Supplemental Report methodology predicted that many consumers were not injured at all.[3]

II. Dr. Singer's Revised Model Predicts that Prices Would Have Been Higher When Service Fees Would Have Been Lower

When Google's expert, Dr. Leonard, pointed out Dr. Singer's nonsensical predictions, Dr. Singer tried to fix the problems in his Supplemental Reply Report. But he only made things worse, further confirming that his entire model is unreliable and, according to Dr. Singer himself, contrary to economics.

In his Supplemental Reply Report, instead of using the same average overcharge rate for all transactions in a category, Dr. Singer calculated damages by trying to predict the service fee and price of each transaction by each individual plaintiff in the but-for world. But these predictions contradicted Dr. Singer's own theory of economics. For some transactions, Dr. Singer predicted that a developer would have charged a ***higher*** price when it would have been subject to a ***lower*** service fee for the same transaction. *See* Ex. F, Singer Supplemental Reply Backup.

Take the example of Microsoft's One Drive product. In Dr. Singer's own workpapers, his Supplemental Reply methodology predicts that Microsoft would have charged a post-tax price of $1.83 if it was subject to a 14.2% service fee, but would have charged a higher price—$2.01—if it was subject to a lower 7.1% service fee. *See* Ex. F, Singer Supplemental Reply Backup. Dr. Singer's Supplemental Reply Report similarly predicts that the developer of the Sweat fitness app would have charged a post-tax price of $17.69 for a subscription if it was subject to a 14.14% service fee, but would have charged a higher price—$19.67—if it was subject to a lower 7.07% service fee. *See id.*, Ex. F, Singer Supplemental Reply Backup.

[3] In May 2022 alone, there were over one million accounts on Google Play that only purchased subscriptions subject to a service fee of 15%, which is *lower* than the but-for service fee predicted by Dr. Singer for those transactions under the "single take rate" and "hybrid" models. *Id.* ¶ 21. This means that Dr. Singer's methodology for calculating individual damages would predict, at a minimum, consumer damages for over one million accounts that by *his own theory* suffered no injury.

Thus, Dr. Singer's Supplemental Reply Report predicts that a developer would charge ***more*** to consumers when its costs ***decrease***. But, as Dr. Singer says in his Reply Report, prices increasing when service fees decrease is "baseless" and "distan[t]" from "fundamental economic principles." Singer Reply Rep. ¶ 17. And Dr. Singer further testified at his deposition that this phenomenon would "not be consistent with the Logit model":

> Q. In the Logit model of demand that you say fits the data here, it wouldn't be consistent with the teachings of economics that if developers service fees went down that they would raise their prices?
>
> A. Right, that would not be consistent.

Ex. G, Singer Tr. (July. 18, 2023) at 16:27-17:3. This finding is so anomalous that, when confronted at his deposition with the fact that his model predicted higher prices at lower service fee rates, Dr. Singer testified that he thought "this could be a typo in the cell" of the spreadsheet "because I don't think that the formula would predict a higher price." *Id.* at 22:5-14.

The reason why Dr. Singer's Supplemental Reply Report makes these predictions that contradict economics is that Dr. Singer's methodology ignores that developers did not reduce prices when Google reduced service fees in the real world. In the Microsoft OneDrive example described above, Microsoft's service fee fell from 30% in December 2021 to 15% in January 2022, so Dr. Singer predicts that Google's service fee was more inflated in December 2021 than it was in January 2022. Dr. Singer accordingly predicts more pass-through on the December 2021 transaction than on the January 2022 transaction. However, because Microsoft charged the same $2.16 post-tax price for both transactions, predicting more pass-through on the December 2021 transaction than on the January 2022 transaction yields a lower price for December 2021 ($1.83) than January 2022 ($2.01)—even though Dr. Singer predicts the service fee would have been higher in December 2021 (14.2% vs. 7.1%).

Dr. Singer explained this at his deposition after reviewing his work papers. *See* Ex. G, Singer Tr. (Jul. 18, 2023) at 43:1-24 ("in the first example, the price is lower because my model

begins with the savings to the developer, and if the developer's savings are bigger, all things equal, including beginning from the same price, you're going to get to a lower but-for price"). In fact, Dr. Singer himself showed in real-time during the deposition using his spreadsheet model that "the result changes" if the data are modified to assume counterfactually that developers reduced prices when Google reduced their service fees. Ex. G, Singer Tr. (July. 18, 2023) at 44:1-6. In other words, Dr. Singer can only correct his results to make them consistent with economics by changing the data about the actual world. This shows that Dr. Singer's model is flawed because it is at odds with real-world data regarding developers' behaviors.

Ultimately, in trying to explain why his Supplemental Reply methodology makes predictions that would "not be consistent with the Logit model," Dr. Singer testified to what Google has been saying all along: his "model will *always* predict when all things are equal, a lower service fee will generate a lower price for sure. There's no way to get around that." (emphasis added). Ex. G, Singer Tr. (July. 18, 2023) at 29:22-23:1; *see also* Defendants' Motion to Exclude Merits Opinions of Dr. Hal Singer, Dkt. No. 487, at 2 ("he relies on a formula that mathematically guarantees pass-through for every developer"). Thus, Dr. Singer testified at his most recent deposition that even if Google's service fee was only 1%, his model would still predict that consumers were overcharged. Ex. G, Singer Tr. (July. 18, 2023) at 42:18-43:10.

In short, because Dr. Singer's model simply assumes pass-through, his methodology yields predictions that developers will charge lower service fees at higher prices that contradict his theory and that he admits are not consistent with his logit pass-through model. This confirms that Dr. Singer's model is unreliable and must be excluded.

CONCLUSION

Dr. Singer's Supplemental Report and Supplemental Reply report confirm that his pass-through model is not reliable. For the foregoing reasons, and those set forth in Google's papers in support of its *Daubert* motion, the Court should exclude Dr. Singer's opinions on injury and damages.

Dated: July 26, 2023 Respectfully submitted,

By: /s/ *Sujal J. Shah*
Sujal J. Shah

Brian C. Rocca, Bar No. 221576
brian.rocca@morganlewis.com
Sujal J. Shah, Bar No. 215230
sujal.shah@morganlewis.com
Michelle Park Chiu, Bar No. 248421
michelle.chiu@morganlewis.com
Minna Lo Naranjo, Bar No. 259005
minna.naranjo@morganlewis.com
Rishi P. Satia, Bar No. 301958
rishi.satia@morganlewis.com
MORGAN, LEWIS & BOCKIUS LLP
One Market, Spear Street Tower
San Francisco, CA 94105-1596
Telephone: (415) 442-1000

Richard S. Taffet, *pro hac vice*
richard.taffet@morganlewis.com
MORGAN, LEWIS & BOCKIUS LLP
101 Park Avenue
New York, NY 10178-0060
Telephone: (212) 309-6000

Glenn D. Pomerantz, Bar No. 112503
glenn.pomerantz@mto.com
Kuruvilla Olasa, Bar No. 281509
kuruvilla.olasa@mto.com
MUNGER, TOLLES & OLSON LLP
350 South Grand Avenue, Fiftieth Floor
Los Angeles, California 90071
Telephone: (213) 683-9100

Kyle W. Mach, Bar No. 282090
kyle.mach@mto.com
Justin P. Raphael, Bar No. 292380
justin.raphael@mto.com
Emily C. Curran-Huberty, Bar No. 293065
emily.curran-huberty@mto.com
MUNGER, TOLLES & OLSON LLP
560 Mission Street, Twenty Seventh Fl.
San Francisco, California 94105
Telephone: (415) 512-4000

Jonathan I. Kravis, *pro hac vice*
jonathan.kravis@mto.com
MUNGER, TOLLES & OLSON LLP
601 Massachusetts Ave. NW, Ste 500E
Washington, D.C. 20001
Telephone: (202) 220-1100

Counsel for Defendants